

Amendments to the Claims

1. (Currently amended) A biologically active polymer product having:
a polymer substrate having a grafted chain thereon, the grafted chain having a functional group; and

a biologically active compound moiety covalently bonded to the grafted chain on the polymer substrate via the functional group on the grafted chain and exerting selective biological activity,

wherein said polymer substrate having a grafted chain is produced by irradiating a polymer substrate with radiation, and then exposing the substrate to a graft-forming monomer to thereby form the grafted chain on the polymer substrate, and

wherein the biologically active compound moiety exerts the selective biological activity while being covalently bonded to the grafted chain on the polymer substrate,

wherein the biologically active compound moiety is selected from the group consisting of beta lactam antibiotics, benzonaphthacenequinone antibiotics, tetracycline antibiotics, macrolide antibiotics, aminoglycoside antibiotics, griseofulvin antibiotics, pimaricin antibiotics, fungicidin antibiotics, formycin antibiotics, toyocamycin antibiotics, vernamicin B antibiotics, ostreogrycin G antibiotics, fungichromin antibiotics, nocardicin antibiotics, OA-6129 antibiotics, and SQ 83360 antibiotics.

2. (Original) The biologically active polymer product according to claim 1, wherein the polymer substrate comprises an organic polymer or an inorganic polymer.

3. (Previously presented) The biologically active polymer product according to claim 2, wherein the biologically active compound moiety is covalently bonded to the grafted chain linked to the surface of the polymer substrate.

4. (Previously presented) The biologically active polymer product according to claim 3, wherein the biologically active compound moiety is linked to the grafted chain through a linkage represented by the formula: -NH-C(O)- or a linkage represented by the formula: -NH-.

5-29. (Cancelled)

30. (Previously presented) The biologically active polymer product according to claim 1, wherein said graft polymer is produced by irradiating a polymer substrate with radiation and then exposing the substrate to a graft-forming monomer in a gas-phase state.

31. (Currently amended) A method for producing a biologically active polymer product which comprises:

irradiating a polymer substrate with radiation so as to provide an active site for graft formation;

exposing the irradiated substrate to a graft-forming monomer having a functional group, or exposing the irradiated substrate to a graft-forming monomer and then introducing a functional group to the grafted chain, to thereby form a grafted chain having a functional group; and

covalently bonding a biologically active compound moiety to the grafted chain on the polymer substrate via the functional group on the grafted chain,

wherein the biologically active compound moiety is selected from the group consisting of beta lactam antibiotics, benzonaphthacenequinone antibiotics, tetracycline antibiotics, macrolide antibiotics, aminoglycoside antibiotics, griseofulvin antibiotics, pimaricin antibiotics, fungicidin antibiotics, formycin antibiotics, toyocamycin antibiotics, vernamicin B antibiotics, ostreogrycin G antibiotics, fungichromin antibiotics, nocardicin antibiotics, OA-6129 antibiotics, and SQ 83360 antibiotics.